

What is claimed is:

1. A function extension type browser comprising:
 - a document parser unit for converting document data into structured document information according to an instruction from an application program;
 - 5 a document information manipulation unit for enabling the structured document information to be referred from the application program;
 - a browser core unit for displaying a document based on the structured document information according to an instruction from the application program;
 - 10 an event information informing unit for, when an event relating to a displayed document takes place, informing the application program of event information indicating a type of the event and a part of the document where the event takes place.
- 15 2. The function extension type browser as claimed in claim 1, wherein the application program is a program to be downloaded when a function is extended.
3. The function extension type browser as claimed in claim 1, wherein the document information manipulation unit has a function of editing the structured document information according to an instruction from the application program.
- 5 4. The function extension type browser as claimed in

claim 1, wherein the application program has a function of, when the event information is informed from the event information informing unit, referring to the structured document information by using the document information manipulation unit, obtaining a content of a node relating to the part where the event takes place among nodes being components of the structured document information, and performing processing according to the type of the event indicated by the informed event information and the obtained content of the node.

5. The function extension type browser as claimed in claim 1, wherein the application program has a function of, when the event information is informed from the event information informing unit, referring to the structured document information by using the document information manipulation unit, obtaining a content of a node relating to the part indicated by the event information among nodes being components of the structured document information, and when the obtained content of the node relates to a proprietary tag or a proprietary attribute, performing processing in accordance with the obtained content of the node and the type of the event indicated by the event information.

6. The function extension type browser as claimed in claim 5, wherein the processing performed in accordance

with the obtained content of the node and the type of the event indicated by the event information is voice

5 production processing.

7. The function extension type browser as claimed in claim 3, wherein the application program has:

a function of instructing the document information manipulation unit on a node intended to be edited, among
5 nodes being components of the structured document information, as well as a content of the editing, and

a function of, when the event information is informed from the event information informing unit, referring to the structured document information using the document
10 information manipulation unit, obtaining a content of a node relating to the part indicated by the event information among the nodes being the components of the structured document information, and performing processing according to the type of the event indicated by the
15 informed event information and the obtained content of the node.

8. The function extension type browser as claimed in claim 3, wherein the application program includes:

a function of instructing the document information manipulation unit on a node intended to be edited, among
5 nodes being components of the structured document information, as well as a content of the editing, and

a function of, when the event information is informed from the event information informing unit, referring to the structured document information using the document

10 information manipulation unit, obtaining a content of a node relating to the part indicated by the event information among the nodes being the components of the structured document information, and if the obtained content of the node is a proprietary tag or a proprietary

15 attribute which are uniquely extended, performing processing according to the obtained content of the node and the type of the event indicated by the event information.

9. The function extension type browser as claimed in claim 8, wherein

the event information informing unit has a function of, when an event relating to a document to be displayed

5 takes place, informing the application program of event information indicating a type of the event, and

the application program has a function of, when the event information is informed from the event information informing unit, instructing the document information

10 manipulation unit on a node intended to be edited among nodes being components of the structured document information corresponding to the document to be displayed as well as a content of the editing.

10. The function extension type browser as claimed in claim 8, wherein

the node intended to be edited is a node corresponding to the proprietary tag or the proprietary attribute which are uniquely extended,

the content of the editing is to cause the node corresponding to the proprietary tag or the proprietary attribute to be a comment node, and

the processing performed according to the proprietary tag or the proprietary attribute is voice production processing.

11. The function extension type browser as claimed in claim 9, wherein

the node intended to be edited is a node corresponding to the proprietary tag or the proprietary attribute which are uniquely extended,

the content of the editing is to cause the node corresponding to the proprietary tag or the proprietary attribute to be a comment node, and

the processing performed according to the proprietary tag or the proprietary attribute is voice production processing.

12. The function extension type browser as claimed in claim 1, wherein the application program has a function of, when the event information is informed from the event

information informing unit, referring to the structured
5 document information by using the document information
manipulation unit, obtaining a content of a node
corresponding to the part indicated by the event
information among nodes being components of the structured
document information, and based on the obtained content,
10 creating meta-information in a format not supported by the
function extension type browser.

13. The function extension type browser as claimed in
claim 1, wherein the application program has:

a function of, according to the event information
informed from the event information informing unit,
5 creating an HTTP request header in a format not supported
by the browser core unit and issuing an HTTP request
including the created HTTP request header, and

a function of obtaining document data and performing
processing relating to an HTTP response header accompanying
10 the document data.

14. The function extension type browser as claimed in
claim 13, wherein the HTTP response header and the HTTP
request header handled by the application program are an
HTTP response header and an HTTP request header relating to
5 a cookie.

15. The function extension type browser as claimed in
claim 1, wherein the application program has a function of

analyzing document data in a format not supported by the document parser unit, and based on an analysis result,
5 creating structured document information by using the document information manipulation unit.

16. The function extension type browser as claimed in claim 1, comprising a memory for storing the application program.

17. The function extension type browser as claimed in claim 3, wherein the structured document information which is used by the browser to display the document is edited at the document information manipulation unit.

18. A browser component being components of a function extension type browser, wherein the function extension type browser comprising:

a document information manipulation unit for enabling
5 the structured document information to be referred from the application program;

a browser core unit for displaying a document based on the structured document information according to an instruction from the application program; and

10 an event information informing unit for, when an event relating to the displayed document takes place, informing the application program of event information indicating a type of the event and a part of the document where the event takes place; wherein

15 the browser component has a function of converting document data into structured document information according to an instruction from an application program.

19. A browser component being components of a function extension type browser, wherein the function extension type browser comprising:

a document parser unit for converting document data
5 into structured document information according to an instruction from an application program;

a browser core unit for displaying a document based on the structured document information according to an instruction from the application program; and

10 an event information informing unit for, when an event relating to the displayed document takes place, informing the application program of event information indicating a type of the event and a part of the document where the event takes place; wherein

15 the browser component has a function of enabling the structured document information to be referred from the application program.

20. A browser component being components of a function extension type browser, wherein the function extension type browser comprising:

a document parser unit for converting document data
5 into structured document information according to an

instruction from an application program;

a document information manipulation unit for enabling the structured document information to be referred from the application program; and

- 10 a browser core unit for displaying a document based on the structured document information according to an instruction from the application program; wherein

the browser component has a function of, when an event relating to the displayed document takes place,

- 15 informing the application program of event information indicating a type of the event and a part of the document where the event takes place.

21. A browser component being components of a function extension type browser, wherein the function extension type browser comprising:

- a document information manipulation unit for
5 enabling structured document information to be referred from the application program and editing the structured document information according to an instruction from the application program;

- a browser core unit for displaying a document based
10 on the structured document information edited in the document information manipulation unit according to an instruction from the application program; and

an event information informing unit for, when an

event relating to a displayed document takes place,
15 informing the application program of event information
indicating a type of the event and a part of the document
where the event takes place; wherein

the browser component has a function of converting
document data into structured document information
20 according to an instruction from the application program.

22. A browser component being components of a
function extension type browser, wherein the function
extension type browser comprising:

a document parser unit for converting document data
5 into structured document information according to an
instruction from an application program;

a browser core unit for displaying a document based
on the structured document information edited according to
an instruction from the application program; and

10 an event information informing unit for, when an
event relating to a displayed document takes place,
informing the application program of event information
indicating a type of the event and a part of the document
where the event takes place; wherein

15 the browser component has a function of enabling the
structured document information to be referred from the
application program and editing the structured document
information according to an instruction from the

application program.

23. A browser component being components of a function extension type browser, wherein the function extension type browser comprising:

5 a document parser unit for converting document data into structured document information according to an instruction from an application program;

a document information manipulation unit for enabling the structured document information to be referred from the application program and editing the
10 structured document information according to an instruction from the application program; and

a browser core unit for displaying a document based on the structured document information edited in the document information manipulation unit according to an
15 instruction from the application program; wherein

the browser component has a function of, when an event relating to a displayed document takes place, informing the application program of event information indicating a type of the event and a part of the document
20 where the event takes place.

24. A program as an electric signal for causing a computer of a terminal to execute

a document parser unit for converting document data into structured document information according to an

5 instruction from an application program;

a document information manipulation unit for enabling the structured document information to be referred from the application program;

a browser core unit for displaying a document based
10 on the structured document information according to an instruction from the application program; and

an event information informing unit for, when an event relating to a displayed document takes place, informing the application program of event information
15 indicating a type of the event and a part of the document where the event takes place.

25. A program as an electric signal for causing a computer of a terminal to execute

a document parser unit for converting document data into structured document information according to an
5 instruction from an application program;

a document information manipulation unit for enabling the structured document information to be referred from the application program and editing the structured document information according to an
10 instruction from the application program;

a browser core unit for displaying a document based on the structured document information according to an instruction from the application program; and

an event information informing unit for, when an
15 event relating to a displayed document takes place,
informing the application program of event information
indicating a type of the event and a part of the document
where the event takes place.

26. A recording medium into which a program, for
causing a computer of a terminal to execute the functions
as claimed in claims 24, is recorded.

27. A recording medium into which a program, for
causing a computer of a terminal to execute the functions
as claimed in claims 25, is recorded.